- 40. (New) The catalyst system of claim 34 wherein the heteroatom ligand group J element is nitrogen.
- 41. (New) The catalyst system of claim 34 wherein the mole ratio of Al:M is from 10:1 to 20,000:1.
 - 42. (New) The catalyst system of claim 34 wherein x is 0 or 1.

REMARKS

Entry of the foregoing amendment and reconsideration of the instant application is respectfully requested.

New, clearer, copies of Tables 1 and 2 have been submitted. Claims 18-33, 35 and 36 have been canceled. Claim 34 was allowed. New dependent claims 37-42 are fully supported by the specification.

Applicant respectfully submits that all pending claims are in condition for allowance. Applicant invites the Examiner to telephone the undersigned attorney if there are any issues outstanding which have not been presented to the Examiner's satisfaction.

Respectfully submitted,

7/1/04 Paige Sof

Attorney for Applicants
Registration No. 38,556

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TABLE I (C ₅ M ₅ -y-xR _x)	M O O	R' 2-1-4)
C _S M _{5-y}	B.	(JR' z-1-y)

(when y =1)	$(C_5M_{5^-y^-x}R_x)$	(JR' 2-1-y)	0	X
dimethylsilyl diethylsilyl diethylsilyl diisopropylsilyl dii-propylsilyl di-p-butylsilyl di-p-butylsilyl di-p-butylsilyl diphenylsilyl methylphenylsilyl diphenylsilyl diphenylsilyl diphenylsilyl cyclopentamethylenesilyl cyclotrimethylenesilyl cyclotrimethylenesilyl cyclotrimethylenesilyl diethylgermanyl diethylgermanyl diethylgermanyl diethylgermanyl diethylgermanyl phenylamido t-butylamido t-butylphosphido phenylphosphido phenylphosphido methylene diethylenelethylene diethylethylene diethylethylene diethylethylene diethylpropylene	cyclopentadienyl methylcyclopentadienyl 1,2-dimethylcyclopentadienyl 1,3- dimetiylcyclopentadienyl 1,3- dimetiylcyclopentadienyl indenyl 1,2-diethylcyclopentadienyl tetramethylcyclopentadienyl a-butylcyclopentadienyl a-butylcyclopentadienyl a-octylcyciopentadienyl a-octylcyclopentadienyl a-octylcyclopentadienyl a-butylcyclopentadienyl apropylcyclopentadienyl apropylcyclopentadienyl apropylcyclopentadienyl apropylcyclopentadienyl apropylcyclopentadienyl apropylcyclopentadienyl arimethylstannylcyclopentadienyl trimethylsinylcyclopentadienyl trifluromethylcyclopentadienyl trimethylsilylcyclopentadienyl trimethylsilylcyclopentadienyl trimethylsilylcyclopentadienyl trimethylsilylcyclopentadienyl trimethylsilylcyclopentadienyl octahydrofluorenyl	t-butylamido phenylamido p-n-butylphenylamido perflurophenylamido n- butylamido methylamido ethylamido perzylamido penzylamido t- butylphosphido t- butylphosphido phenzylamido t- butylphosphido cyclohexylphosphido oxo (when y = 1) methoxide (when y = 0) ethoxide (when y = 0) ethoxide (when y = 0) ethylthio (when y = 0) ethylthio (when y = 0)	hydride chloro methyl ethyl phenyl fluoro bromo iodo n-propyl isopropyl isoamyl hexyl isobutyl hexyl isobutyl heptyl octyl nonyl decyl cetyl methoxy propoxy phenoxy phenoxy dimethylamido diethylamido	zirconium hafnium titanium
l, l,4,4- tetramethylidisilylethylene			propylidene (both Q) ethyleneglycol dianion	

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No. Type 15 State 15	EXP. DILUENT	E E	TRAN	TRANSITION METAL COMPOUND (TMC)	ALUM	ALUMOXANE	mmole MAO:TMC		8	RXN TEMP.	RXN TIME	YTELD			SCB/ 1000 C	CAT. ACTIVITY G. POLYMER/MMOLE	TY MOLE
40 A 5588 x 10 ⁴ MAO 9 1611 chylore-color 80 6.5 5.4 12,260 2849 40 A 5588 x 10 ⁴ MAO 4.5 1611 chylore-color 80 6.3 5.2 57,200 2753 30 A 5288 x 10 ⁴ MAO 4.5 1611 chylore-color 40 6.3 5.2 57,200 2753 40 A 5288 x 10 ⁴ MAO 4.5 1611 chylore-color 40 6.3 5.4 63500 2455 40 A 5288 x 10 ⁴ MAO 5.0 80 6.3 1.4 5.4 63500 2455 40 A 5288 x 10 ⁴ MAO 5.0 80 6.3 1.4 43700 5.7 80 6.3 1.4 43700 5.4 6.0 7.2 6.0 7.2 6.0 7.2 6.0 7.2 6.0 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 </th <th></th> <th>E</th> <th>Туре</th> <th>mmole</th> <th>Type</th> <th>mmole</th> <th>(×10³)</th> <th>MONOMER</th> <th>MONOMER</th> <th>ن</th> <th>HR.</th> <th>က်</th> <th>MW</th> <th></th> <th></th> <th></th> <th>ш</th>		E	Туре	mmole	Type	mmole	(×10³)	MONOMER	MONOMER	ن	HR.	က်	MW				ш
40 A 5588 x 10 ⁻⁴ MAO 9 1611 oppin 60 0.5 27,20 277,20 275 30 A 2794 x 10 ⁻⁴ MAO 4.5 1611 chlyline 80 0.5 24 637,00 24.5 67.5 40 A 2794 x 10 ⁻⁴ MAO 4.5 1611 chlyline 40 0.5 24 637,00 24.5 67.5 40 A 5.588 x 10 ⁻⁴ MAO 5.72 60pin 60 0.5 24 637,00 24.5 67.5 40 A 5.588 x 10 ⁻⁴ MAO 5.72 60pin 60 0.5 24 637,00 27.8 60		300	▼	5.588 × 10 ⁻⁴	MAO	6	16.11	ethylene-		8	0.5	5.4	212,600	2.849		1.933 × 10	
30 A 2794 x 10 ⁻⁴ MAO 45 1611 Gibit Chair 60 3 33 35980 243 6350 3445 40 A 2.794 x 10 ⁻⁴ MAO 45 1611 Gibit Ghid 40 63 24 63500 3445 40 A 5.588 x 10 ⁻⁴ MAO 5.72 80 60 pist 80 63 14 34700 3.64 40 A 5.588 x 10 ⁻⁴ MAO 5.72 80 60 pist 80 63 11 79,600 2.73 40 A' 5.588 x 10 ⁻⁴ MAO 6.0 70 14 6.0 6.0 7.1 7.2 6.0 7.1 7.2 8.0 6.0 7.1 7.0 8.0 6.0 7.1 8.0 6.0 7.1 8.0 6.0 7.1 8.0 6.0 7.1 8.0 6.0 7.1 8.0 6.0 7.1 8.0 7.1 8.0	oluene	400	4	5.588 × 10-	MAO	6	16.11	ou psi ethylene- 60 psi		80	0.5	9.2	257,200	2.275		3.293 × 10	
30 A 2.794 x 10 ⁻⁴ MAO 45 16.11 Coloration 40 6.5 24 6.3500 3.445 4.0 A 5.588 x 10 ⁻⁴ MAO 5 89 chipter 80 0.5 19.4 34.700 3.64 4.0 A' 5.588 x 10 ⁻⁴ MAO 5.0 60 psi 80 0.5 1.1 43.00 3.64 4.0 A' 5.588 x 10 ⁻⁴ MAO 5.0 80 chipter 80 0.5 1.1 43.00 2.78 4.0 A' 5.588 x 10 ⁻⁴ MAO 0.2 0.7 chipter 80 0.5 1.1 43.00 2.73 4.0 A' 5.588 x 10 ⁻⁴ MAO 0.2 0.7 chipter 80 0.5 1.1 43.00 2.73 4.0 A' 5.0 8.9 chipter 80 0.1 2.4 2.4 2.2 2.0 2.0 2.2 2.0 2.2 2.0 <td>oluene</td> <td>300</td> <td><</td> <td>2.794 × 10⁻⁴</td> <td>MAO</td> <td>5.4</td> <td>16.11</td> <td>ethylene-</td> <td></td> <td>80</td> <td>0.5</td> <td>3.8</td> <td>359,800</td> <td>2.425</td> <td></td> <td>2.720 × 10</td> <td></td>	oluene	300	<	2.794 × 10 ⁻⁴	MAO	5.4	16.11	ethylene-		80	0.5	3.8	359,800	2.425		2.720 × 10	
400 A. 5.588 x 10 ⁻⁴ MAO 57.2 8.98 chypers 80 0.5 19.4 343,700 3.674 400 A.* 5.588 x 10 ⁻⁴ MAO 57.2 8.98 chypers 80 0.5 3.4 285,00 2.806 400 A.* 5.588 x 10 ⁻⁴ MAO 67.2 8.98 chypers 80 0.5 11 479,600 2.138 400 A.* 5.588 x 10 ⁻⁴ MAO 0.2 0.4 chypers 80 0.5 11 479,600 2.138 400 A.* 5.588 x 10 ⁻⁴ MAO 0.1 0.018 chypers 80 0.5 11 479,600 2.138 400 A.* 5.588 x 10 ⁻⁴ MAO 5 8.97 chypers 80 0.5 11 278,400 2.142 400 A.* 5.588 x 10 ⁻⁴ MAO 5 8.97 chypers 80 0.5 11 278,400 2.142 400 B. 5.573 x 10 ⁻⁴ MAO 5 8.97 chypers 80 0.5 11 278,400 2.142 400 B. 5.573 x 10 ⁻⁴ MAO 5 10.44 chypers 80 0.5 11 278,400 2.142 400 B. 5.573 x 10 ⁻⁴ MAO 5 10.44 chypers 80 0.5 11 278,400 2.142 400 B. 5.573 x 10 ⁻⁴ MAO 5 10.44 chypers 80 0.5 11 278,400 2.142 400 B. 5.573 x 10 ⁻⁴ MAO 5 10.44 chypers 80 0.5 11 278,400 2.142 400 B. 5.573 x 10 ⁻⁴ MAO 5 10.44 chypers 80 0.5 11 278,400 2.142 400 B. 5.573 x 10 ⁻⁴ MAO 5 8.98 chypers 80 0.5 11 29,900 2.47 400 B. 5.573 x 10 ⁻⁴ MAO 5 8.98 chypers 80 0.5 11 29,900 2.47 400 B. 5.573 x 10 ⁻⁴ MAO 5 8.98 chypers 80 0.5 11 29,900 2.49 400 B. 5.573 x 10 ⁻⁴ MAO 5 8.98 chypers 80 0.5 11 29,900 2.49 400 B. 5.573 x 10 ⁻⁴ MAO 5 8.98 chypers 80 0.5 11 29,900 2.49 400 B. 5.573 x 10 ⁻⁴ MAO 5 8.98 chypers 80 0.5 11 29,900 2.49 400 B. 5.573 x 10 ⁻⁴ MAO 5 8.98 chypers 80 0.5 11 29,900 2.49 400 B. 5.573 x 10 ⁻⁴ MAO 5 8.98 chypers 80 0.5 11 29,900 2.49 400 B. 5.58 x 10 ⁻⁴ MAO 5 8.89 chypers 80 0.5 11 29,900 2.49 400 B. 5.58 x 10 ⁻⁴ MAO 5 8.89 chypers 80 0.5 11 29,900 2.49 400 B. 5.58 x 10 ⁻⁴ MAO 5 8.89 chypers 80 0.5 11 29,900 2.49 400 B. 5.58 x 10 ⁻⁴ MAO 5 8.89 chypers 80 0.5 11 29,900 2.49 400 B. 5.58 x 10 ⁻⁴ MAO 5 8.91 chypers 80 0.5 11 29,900 2.49 400 B. 5.58 x 10 ⁻⁴ MAO 5 8.91 chypers 80 0.5 11 29,900 2.49 400 B. 5.58 x 10 ⁻⁴ MAO 5 8.91 chypers 80 0.5 11 29,900 2.49 400 B. 5.58 x 10 ⁻⁴ MAO 5 8.91 chypers 80 0.5 11 29,900 2.49 400 B. 5.58 x 10 ⁻⁴ MAO 5 8.91 chypers 80 0.5 11 29,900 2.49 400 B. 5.58 x 10 ⁻⁴ MAO 5 8.91 chypers 80 0.5 11 29,900 2.49 400 B. 5.58 x 10 ⁻⁴ MAO 5 8.91 chypers 80 0.5 11 2	oluene	300	4	2.794 × 10 ⁻⁴	MAO	4.5	16.11	ethylene-		40	0.5	2.4	635,000	3.445		1.718 × 10	
400 A [*] 5.588 × 10 ^{-*} MAO 5/2 8.98 Glypin- 400 A [*] 5.588 × 10 ^{-*} MAO 5/2 6.09 Glypin- 400 A [*] 5.588 × 10 ^{-*} MAO 0.2× 0.47 Glypin- 400 A [*] 5.588 × 10 ^{-*} MAO 0.2× 0.47 Glypin- 400 A [*] 5.588 × 10 ^{-*} MAO 0.1 0.018 Glypin- 400 A [*] 5.588 × 10 ^{-*} MAO 0.1 0.018 Glypin- 400 A [*] 5.588 × 10 ^{-*} MAO 0.1 0.018 Glypin- 400 B 5.573 × 10 ^{-*} MAO 0.1 0.018 Glypin- 400 D 5.573 × 10 ^{-*} MAO 0.1 0.018 Glypin- 400 D 5.573 × 10 ^{-*} MAO 0.1 0.018 Glypin- 400 C 5.573 × 10 ^{-*} MAO 0.1 0.018 Glypin- 400 C 5.573 × 10 ^{-*} MAO 0.1 0.018 Glypin- 400 C 5.573 × 10 ^{-*} MAO 0.1 0.018 Glypin- 400 C 5.573 × 10 ^{-*} MAO 0.1 0.018 Glypin- 400 C 5.573 × 10 ^{-*} MAO 0.1 0.018 Glypin- 400 C 5.573 × 10 ^{-*} MAO 0.1 0.018 Glypin- 400 C 5.573 × 10 ^{-*} MAO 0.1 0.00 Glypin- 400 C 5.573 × 10 ^{-*} MAO 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	oluene	8	∢	5.588 × 10 ⁻⁴	MAO	s	8.95	ethylene-		80	0.5	19.4	343,700	3.674		6.943 × 10	•
400 A* 5.588 x 10 ⁻⁴ MAO 5.02 8.98 objete o		9	*	5.588 × 10 ⁻⁴	MAO	5.02	8.98	ethylene-		80	0.5	3.4	285,000	2.806		1.217 × 10	7
400 A* 5.588 x 10 ⁻⁴ MAO 0.2* 0.47 objected by the companies of the compa			A*.b	5.588 × 10 ⁻⁴	MAO	5.02	8.98	ou psi ethylene-		80	0.5	2.0	260,700	2.738		7.158 × 10	ę.
400 A* 5.588 × 10 ⁻⁴ MAO 0.1 6.0 psi chylene- 60 psi chylene-		400	*≺	5.588 × 10-4	MAO	0.2%	0.47	ou psi ethylene-		80	0.5	1.1	479,600	3.130		3.937 × 10	E_
B 5.573 × 10 ⁻⁴ MAO 5 60 psi		400	*4	5.588 × 10 ⁻⁴	MAO	0.1	0.018	ethylene-		8	0.5	1.6	458,800	2.037		5.727 × 10	۲L
C 1.118 × 10 ⁻³ MAO 4 3.58 6thylene- 60 psi D 5.573 × 10 ⁻⁴ MAO 5 8.97 6thylene- 80 0.5 1.1 278,400 2.142 E 5.61 × 10 ⁻⁴ MAO 9 16.04 6thylene- 80 0.5 1.2 28,200 2.438 F 4.79 × 10 ⁻⁴ MAO 5 10.44 6thylene- 80 0.5 1.1 29,700 2.438 G 5.22 × 10 ⁻⁴ MAO 5 9.58 6thylene- 80 0.5 11.1 299,800 2.477 H 5.62 × 10 ⁻⁴ MAO 5 8.98 6thylene- 80 0.5 11.1 299,800 2.869 I 5.57 × 10 ⁻⁴ MAO 5 8.98 6thylene- 80 0.5 11.1 299,800 2.869 I 5.57 × 10 ⁻⁴ MAO 5 8.98 6thylene- 80 0.5 11.1 299,800 2.809 K 5.60 × 10 ⁻⁴ MAO 5 8.98 6thylene- 80 0.5 11.1 299,800 2.809 K 5.60 × 10 ⁻⁴ MAO 5 8.98 6thylene- 80 0.5 11.3 24,900 2.801 K 5.60 × 10 ⁻⁴ MAO 5 8.98 6thylene- 90 987 987 987 987 987 987 987 987 987 987	oluene	400	æ	5.573 × 10-4	MAO	5	8.97	ou psi ethylene-		80	0.17	9.6	241,200	2.628		1.034 × 10	v.
E 5.61 × 10 ⁻⁴ MAO 5 8.97 chylane-chylane		300	ပ	1.118×10^{-3}	MAO	4	3.58	60 psı ethylene-		80	0.5	1.1	278,400	2.142		3.041 × 10	2
E 5.61 × 10 ⁻⁴ MAO 9 16.04 ethylene- 80 0.5 2.2 258,200 2.348 F 4.79 × 10 ⁻⁴ MAO 5 10.44 ethylene- 80 0.5 5.3 119,900 2.477 G 5.22 × 10 ⁻⁴ MAO 5 9.58 ethylene- 80 0.5 11.1 299,800 2.549 H 5.62 × 10 ⁻⁴ MAO 5 8.98 ethylene- 80 0.5 11.1 299,800 2.569 I 5.57 × 10 ⁻⁴ MAO 5 8.98 ethylene- 80 0.5 11.1 299,800 2.401 K 5.50 × 10 ⁻⁴ MAO 5 8.98 ethylene- 80 0.5 13.3 24,900 2.401 K 5.60 × 10 ⁻⁴ MAO 5 8.93 ethylene- 9ropylene- 80 0.5 13.3 24,900 2.027 A 1.118 × 10 ⁻³ MAO 9 8.05 ethylene- propylene- 80 0.5 13.3 24,900 2.027 A 2.235 × 10 ⁻³ MAO 9 4.03 ethylene- propylene- 50 0.5 25.4 184,500 3.424 23.5 21.5 65 18.75 65 18.		400	Ω	5.573 × 10 ⁻⁴	MAO	ν.	8.97	60 psi ethylene-		80	0.5	1.9	229,700	2.618		6.819 × 10	2
F 4.79 × 10 ⁻⁴ MAO 5 10.44 chylene 60 psi 60 si 5.3 19,900 2.477 G 5.22 × 10 ⁻⁴ MAO 5 9.58 chylene 80 0.5 3.5 237,300 2.549 H 5.62 × 10 ⁻⁴ MAO 5 8.98 chylene 80 0.5 11.1 299,800 2.569 I 5.57 × 10 ⁻⁴ MAO 5 8.98 chylene 80 0.5 11.1 299,800 2.569 K 5.08 × 10 ⁻⁴ MAO 5 8.94 chylene 80 0.5 11.1 299,800 2.803 K 5.50 × 10 ⁻⁴ MAO 5 8.94 chylene 80 0.5 18.5 174,300 2.401 K 5.60 × 10 ⁻⁴ MAO 5 8.93 chylene 90 0.5 13.3 24,900 2.027 A 1.118 × 10 ⁻³ MAO 9 8.05 chylene 90 0.5 13.3 24,900 2.027 A 2.235 × 10 ⁻³ MAO 9 4.03 chylene 90 0.5 13.3 24,900 2.027 A 5.588 × 10 ⁻³ MAO 9 1.61 chylene 90 0.5 25.4 184,500 3.424 23.5 21.5 A 5.588 × 10 ⁻³ MAO 9 1.61 chylene 1-buttene 50 0.5 25.4 184,500 3.424 23.5 21.5 B 5.59 × 10 ⁻⁴ MAO 9 1.61 chylene 1-buttene 50 0.5 25.4 184,500 3.424 23.5 21.5	схапе	300	ய	5.61 × 10=4	MAO	0	16.04	ethylene-		80	0.5	2.2	258,200	2.348		7.843 × 1	<u>e</u>
G 5.22 × 10 ⁻⁴ MAO 5 9.58 chylene- 80 0.5 3.5 237,300 2.549 H 5.62 × 10 ⁻⁴ MAO 5 8.90 chylene- 80 0.5 11.1 299,800 2.569 I 5.57 × 10 ⁻⁴ MAO 5 8.98 chylene- 80 0.5 11.1 299,800 2.569 I 5.59 × 10 ⁻⁴ MAO 5 8.94 chylene- 80 0.5 8.6 321,000 2.803 K 5.06 × 10 ⁻⁴ MAO 5 9.87 chylene- 80 0.5 15.5 174,300 2.401 C 5.60 × 10 ⁻⁴ MAO 5 8.93 chylene- 80 0.5 15.5 174,300 2.193 A 1.118 × 10 ⁻³ MAO 9 8.05 chylene- propylene- 80 0.5 13.3 24,900 2.027 A 1.118 × 10 ⁻³ MAO 9 4.03 chylene- propylene- 50 0.5 25.4 184,500 3.424 23.5 21.5 65 psi 200 ml A 2.235 × 10 ⁻³ MAO 9 1.61 chylene- propylene- 50 0.5 25.4 184,500 3.424 23.5 21.5 65 psi 100 ml A 5.588 × 10 ⁻³ MAO 9 1.61 chylene- 1-buttene- 50 0.5 25.4 184,500 3.424 23.5 21.5 5 psi 100 ml		400	ĹL.	4.79 × 10 ⁻⁴	MAO	v	10.44	ethylene-		80	0.5	5.3	319,900	2.477		2.213 × 10	•
H 5.62 × 10 ⁻⁴ MAO 5 8.99 chylene- 80 0.5 11.1 299,800 2.569 1 5.57 × 10 ⁻⁴ MAO 5 8.98 chylene- 80 0.5 11.1 299,800 1.596 1 5.53 × 10 ⁻⁴ MAO 5 8.94 chylene- 80 0.5 8.6 321,000 1.996 1 5.50 × 10 ⁻⁴ MAO 5 9.87 chylene- 9 0.5 2.66 187,300 2.401 1 5.60 × 10 ⁻⁴ MAO 5 8.93 chylene- 9 0.5 15.5 174,300 2.193 A 1.118 × 10 ⁻³ MAO 9 8.05 chylene- propylene- 80 0.5 13.3 24,900 2.027 7.3.5 A 2.235 × 10 ⁻³ MAO 9 4.03 chylene- propylene- 50 0.5 6.0 83,100 2.370 7.57 A 5.588 × 10 ⁻³ MAO 9 1.61 chylene- propylene- 50 0.5 25.4 184,500 3.424 23.5 21.5 A 5.588 × 10 ⁻³ MAO 9 1.61 chylene- propylene- 50 0.5 25.4 184,500 3.424 23.5 21.5 A 5.588 × 10 ⁻³ MAO 9 1.61 chylene- propylene- 50 0.5 25.4 184,500 3.424 23.5 21.5		400	හ	5.22 × 10 ⁻⁴	MAO	'n	9.58	oo psi ethylene-		80	0.5	3.5	237,300	2.549		1.341 × 1	•
1 5.57 × 10 ⁻⁴ MAO 5 8.98 chylene- 80 0.5 0.9 377,000 1.996 J 5.59 × 10 ⁻⁴ MAO 5 8.94 chylene- 80 0.5 8.6 321,000 2.803 K 5.06 × 10 ⁻⁴ MAO 5 9.87 chylene- 80 0.5 15.5 174,300 2.193 L 5.60 × 10 ⁻⁴ MAO 5 8.93 chylene- 80 0.5 15.5 174,300 2.193 A 1.118 × 10 ⁻³ MAO 9 8.05 chylene- propylene- 80 0.5 13.3 24,900 2.027 73.5 00 psi 200 ml A 2.235 × 10 ⁻³ MAO 9 4.03 chylene- propylene- 50 0.5 6.0 83,100 2.370 75.7 60 psi 200 ml A 5.588 × 10 ⁻³ MAO 9 1.61 chylene- 1-buttene- 50 0.5 25.4 184,500 3.424 23.5 21.5 65 psi 100 ml A 5.588 × 10 ⁻³ MAO 9 1.61 chylene- 1-buttene-	oluene	400	Ħ	5.62 × 10 ⁻⁴	MAO	S	8.90	ethylene-		80	0.5	11.1	299,800	2.569		3.950 × 1	•
1 5.59 × 10 ⁻⁴ MAO 5 8.94 64lylene- K 5.06 × 10 ⁻⁴ MAO 5 9.87 chlylene- L 5.60 × 10 ⁻⁴ MAO 5 8.93 chlylene- A 1.118 × 10 ⁻³ MAO 9 8.05 chlylene- A 2.235 × 10 ⁻³ MAO 9 4.03 chlylene- A 5.588 × 10 ⁻³ MAO 9 1.61 chlylene- A 5.588 × 10 ⁻³ MAO 9 1.61 chlylene- B 0 0.5 15.5 174,300 2.491 B 0 0.5 15.5 174,300 2.193 A 7.235 × 10 ⁻³ MAO 9 4.03 chlylene- B 0 0.5 13.3 24,900 2.027 B 7.57 C 7.57 C 7.58 C 7.58 C 7.59 C 7.50 C 7.50 C 7.51 C 7.52 C 7.53 C 7.53 C 7.53 C 7.53 C 7.53 C 7.53 C 7.54 C 7.55 C 7.5	oluene	400	_	5.57×10^{-4}	MAO	'n	8.98	ou psi ethylene-		80	0.5	0.9	377,000	1.996		3.232 × 1	2
K 5.06 × 10 ⁻⁴ MAO 5 9.87 chylene- 80 0.5 26.6 187,300 2.401 L 5.60 × 10 ⁻⁴ MAO 5 89.3 chylene- 80 0.5 15.5 174,300 2.193 A 1.118 × 10 ⁻³ MAO 9 8.05 chylene- 80 0.5 13.3 24,900 2.027 73.5 A 2.235 × 10 ⁻³ MAO 9 8.05 chylene- 50 0.5 6.0 83,100 2.370 75.7 A 2.235 × 10 ⁻³ MAO 9 4.03 chylene- propylene- 50 0.5 6.0 83,100 2.370 75.7 A 5.588 × 10 ⁻³ MAO 9 1.61 chylene- 10 min 50 0.5 25.4 184,500 3.424 23.5 21.5 A 5.588 × 10 ⁻³ MAO 9 1.61 chylene- 1-buttene- 50 0.5 25.4 184,500 <td< td=""><td></td><td>400</td><td>1</td><td>5.59 × 10⁻⁴</td><td>MAO</td><td>S</td><td>8.94</td><td>60 psi ethylene-</td><td></td><td>80</td><td>0.5</td><td>8.6</td><td>321,000</td><td>2.803</td><td></td><td>3.077 × 1</td><td>•</td></td<>		400	1	5.59 × 10 ⁻⁴	MAO	S	8.94	60 psi ethylene-		80	0.5	8.6	321,000	2.803		3.077 × 1	•
L 5.60 × 10 ⁻⁴ MAO 5 8.93 chylene- 80 0.5 15.5 174,300 2.193 A 1.118 × 10 ⁻³ MAO 9 8.05 chylene- propylene- 80 0.5 13.3 24,900 2.027 73.5 A 2.235 × 10 ⁻³ MAO 9 4.03 chylene- propylene- 50 0.5 6.0 83,100 2.370 75.7 A 5.588 × 10 ⁻³ MAO 9 1.61 chylene- 1-buttene- 50 0.5 25.4 184,500 3.424 23.5 21.5 S 6.0 psi 200 ml 20		300	×	5.06 × 10 ⁻⁴	MAO	ν	78.6	ou psi ethylene-		88	0.5	26.6	187,300	2.401		1.051 × 1	2
A 1.118 × 10 ⁻³ MAO 9 8.05 chtylene- propylene- 80 0.5 13.3 24,900 2.027 73.5 60 psi 200 ml A 2.235 × 10 ⁻³ MAO 9 4.03 chtylene- propylene- 50 0.5 6.0 83,100 2.370 75.7 60 psi 200 ml A 5.588 × 10 ⁻³ MAO 9 1.61 chtylene- 1buttene- 50 0.5 25.4 184,500 3.424 23.5 21.5 65 psi 100 ml	oluene	400	1	8	MAO	S	8.93	ou psi ethylene-		80	0.5	15.5	174,300	2.193		5.536 × 1	<u>v.</u>
A 2.235 × 10 ⁻³ MAO 9 4.03 ethylene- propylene- 50 0.5 6.0 83,100 2.370 75.7 60 psi 200 ml		300	¥	1.118×10^{-3}	MAO	6	8.05	ethylene-	propylene-	80	0.5	13.3	24,900	2.027	73		•
A 5.588 × 10 ⁻³ MAO 9 1.61 chylene- 50 0.5 25.4 184,500 3.424 23.5 21.5 65 psi 100 ml	oluene	200	∢	33	MAO	6	4.03	ethylene-	propylene-	20	0.5	0.9	83,100	2.370	27		5
	oluene	150	∢	5.588×10^{-3}	MAO	6	1.61	ethylene- 65 psi	1-butene- 100 ml	20	0.5	25.4	184,500	3.424			2

TABLE 2-continued

4

m	,	l														
CAT. ACTIVITY G. POLYMER/MMOLE	TMC-MOLE	1.081 × 10*	8.912×10^3	6.979×10^{3}	5.727×10^3	6.417×10^2	1.461×10^3	2.682×10^{3}	5.480×10^{3}	4.007×10^3	1.542×10^3	9.485 × 10 ³	6.979×10^3	5.404×10^3	4.402 × 10 ³	4.868 × 10 ³
	R	26.5	18.9	12.7	19.4	33.5	33.3	17.1	45.4	49.6	33.9	39.1	16.5	1.8°	0.3	2.2°
SCB/ 1000 C	NMR	30.8	23.3	12.1	19.2											
	MWD	3.097	3.290	3.510	3.158	2.463	3.341	2.816	2.980	2.512	2.394	3.373	3.007	1.683	1.711	2.388
	MW	143,400	163,200	150,600	116,200	323,600	251,300	425,000	286,600	224,800	207,600	222,800	548,600	611,800	812,600	163,400
YIELD	eio.	30.2	24.9	19.5	16.0	1.8	3.5	7.0	15.4	11.2	3.9	26.5	19.7	15.1	12.3	13.6
RXN	HR.	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
RXN TEMP.	ن °	20	20	20	20	20	20	50	20	20	80	20	20	20	20	20
ė	MONOMER	1-butene-	1-butene-	50 ml 1-butene- 50 ml	1-butene-	1-butene-	100 ml 1-butene-	100 ml 1-butene-	100 ml 1-butene-	1-butene-	100 ml 1-butene-	100 ml 1-hexene-	100 mi 1-octene	150 mil 4-methyl- 1-nentenes	100 ml norbornene-	100 ml 2.2 m cis-1,4- hexadiene 100 ml
	MONOMER MONOMER	ethylene- 65 nsi	ethylene-	65 psi ethylene-	ethylene-	ethylene-	65 psi ethylene-	65 psi ethylene-	65 psi ethylene-	os psi ethylene	65 psi ethylene-	65 psi ethylene-	os psi ethylene-	oo psi ethylene- 65 nei	ethylene-	oo psi ethylene- 65 psi
mmole MAO:TMC	(×10³)	1.61	1.43	1.43	1.43	1.60	1.88	1.34	1.25	1.25	1.38	1.25	1.25	1.25	1.25	1.25
	mmole	6	s o	æ	x	o .	s	۲.		. ,	7		7	7	1-	1~
ALUMOXANE	Туре	MAO	MAO	MAO	MAO	MAO	MAO	MAO	MAO	MAO	MAO	MAO	MAO	MAO	MAO	МАО
TRANSITION METAL COMPOUND (TMC)	mmole	5.588 × 10 ⁻³	5.588×10^{-3}	5.588 × 10 ⁻³	5.588 × 10 ⁻³	5.61×10^{-3}	4.79×10^{-3}	5.22 × 10 ⁻³	5.62×10^{-3}	5.59×10^{-3}	5.06×10^{-3}	5.588 × 10 ⁻³	5.588 × 10 ⁻³	5.588 × 10 ⁻³	5.588 × 10 ⁻³	5.588 × 10 ⁻³
TRANS	Type	<	∀	<	∢	ы	ĹĿ.	ڻ ڻ	Ξ		×	∢	<	4	∢	∢
ENT	E	100	200	200	150	200	150	150	150	150	150	250	300	300	300	300
DILUENT	Type	Toluene	9 Toluene 200	10 Hexane	Hexane 150	Toluene	Toluene 150	Toluene 150	Toluene	Toluene 150	Toluene	Toluene	Toluene	Toluene	Tolucne	39 Toluene 300
EXP.	NO.	& _	6	10	=	. 77	. 54	. 92	. 82	ક્ષ	. 26	35	%	37	38	. 39

*Compound A was preactivated by dissolving the compound in solvent containing MAO. Preincubation of activated compound A was for one day.
*Mole % comonomer.